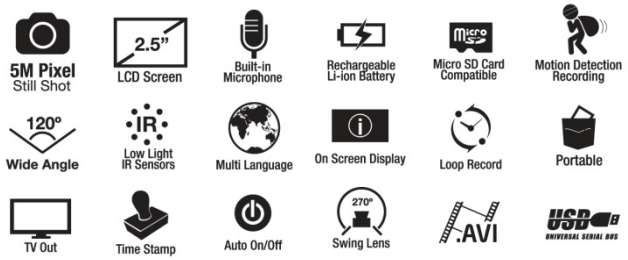
High Definition In Car Digital Video Recorder

CRASH CAM HD

720p@30fps



Please read carefully before use

It is recommended to use a **Class 4** (4Mb/s write speed) Micro **SDHC** card for optimal performance.

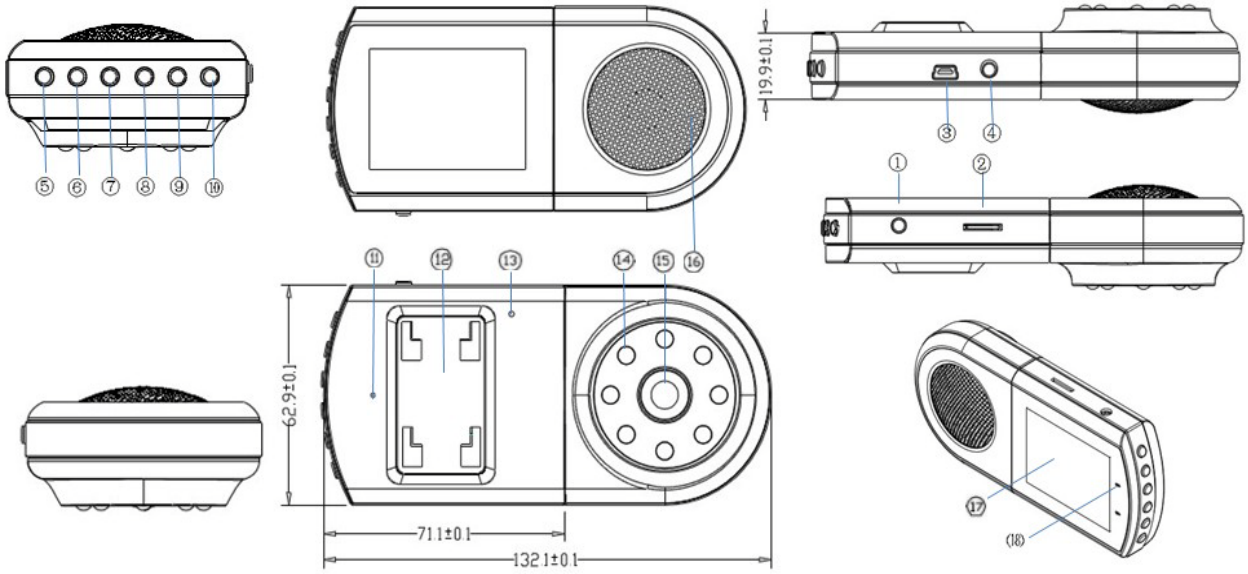
TABLE OF CONTENTS

Important Safety Instructions and Precautions 2
Product Connections and Use 3
Whats in the box 3
FEATURES AND OPERATION 4
Memory Card required for operation 4
Power on/off function (auto on/off) 4
Auto Record when turned on 4
Installation on the car windscreen 4
Using the 270 degree swing lens function 4
Recording 5
Video Mode Setting (on screen menu options) 6
Setup Mode Setting (on screen menu options) 6
Digital Still Camera (DSC) Mode Settings: 7
USB Connection 9
Playback on TV 9
Note: 9
Trouble Shooting / Q & A 11
PRODUCT Specifications 11

IMPORTANT SAFETY INSTRUCTIONS AND PRECAUTIONS

- Read all instructions carefully before use.
- Retain manuals for future reference.
- Use this product only in the manner described.
- Only use a water-dampened soft-cloth to clean the surface of this product.
- The following will damage this product: any liquid such as water or moisture, extreme heat; cold; humidity, dusty or sandy environments.
- Only place this device on stable surfaces and ensure that any attached cables are secure and will not cause the device to fall.
- If charging is required, it is recommended to thoroughly charge electronic devices for the first time overnight. Subsequent charges can be as needed. During charging, or extended use, the product may become warm.
- There are no user serviceable parts in this product.
- Un-authorized attempts to dismantle or repair this product will void product warranty
- Using this device near other electronic devices may cause interference.

PRODUCT CONNECTIONS AND USE



1. Flip Button- rotates the image 180° on screen
2. Micro SD card slot, please use a Class 4 micro **SDHC**
3. Mini USB Port (for charging or connecting to a PC)
4. AV Out (3.5mm to RCA connectors) – to watch on a TV
5. ▲ (in on-screen menu) up
6. ▼ (in on-screen menu) down
7. Ok (confirm selection in on-screen menu)
8. Power on/off
9. Mode select
10. Menu (on screen display menu)
11. [Not used]
12. Mounting plate
13. Reset (pin) switch
14. Infrared LEDs for night vision
15. Lens, wide-angle 120°
16. Speaker
17. Colour LCD, 2.5"
18. LED indicator, Green-on, Red- charging

WHATS IN THE BOX

Actual version may vary from that shown.

FEATURES AND OPERATION

Memory Card required for operation

The Navcam-HD requires a Micro SD card (not included) to record video / image content. *(see page 9 for a table showing SD card capacity and the relevant amount of video / image content able to be stored).* For optimal performance, we recommend using a Class 4 Micro SD card (the most common type) to ensure fast data transfer rates.

Power on/off function (auto on/off)

To turn on the Navcam-HD, press the power button on the side of the device. To turn off, press the same power button.

When connected to the 12v DC socket (cigarette socket) of your car, the Navcam-HD will turn on and off automatically when the car's ignition is turned on or off. If the Navcam-HD does not turn off immediately it means the device is completing the file save process before turning off (usually only a few seconds).

If the 12v socket is "constant on" (in some European vehicles), then the Navcam-HD will need to be turned on/off manually by the power button.

Whilst connected to the car's 12V DC socket (or from a powered USB hub or PC USB port) the LED indicator will glow red (battery is charging) and will be off once the battery is fully charged.

To turn off the LCD display on the unit (but with the unit still recording), press the ▼ button. (ideal for night time driving)

Auto Record when turned on

When the NAVCAM-HD is turned on (either by pressing the power button or auto on) the device will automatically begin recording. To stop recording, press the OK button or disconnect the power cable.

Installation on the car windscreen

The NAVCAM-HD works best when mounted centrally and high up on the windscreen (typically behind or close to the rear vision mirror). Use the supplied windscreen suction mount to affix the Navcam-HD to the windscreen and then adjust the mount until you can see a clear view of the road ahead on the LCD.

Using the 270 degree swing lens function

The lens section of the NAVCAM-HD can be rotated up to 270 degrees. This is ideal for better camera positioning or for recording inside the car (passengers). Should the

image appear upside down, press the “flip” button on the top of the Navcam-HD unit to flip the image 180 degrees.

Recording

Turn on the NAVCAM-HD. Recording should start automatically. If not press the “OK” button. When recording, the word “REC” will appear in the LCD and the green LED will flash. The recorded file is saved onto the Micro SDHC Card. Stop recording by either pressing the **OK** button or turning the car ignition off (stopping power to the device)

In the event of an incident / accident – STOP the Recording.

- Due to the “cycle recording” nature of this technology, older recorded files will be overwritten (depending on the chosen resolution settings and the memory capacity of the Micro SD card). For example a 2GB SD card at HD resolution will only offer you 20 minutes of record time before the files (2 or 5 or 15min sizes) start to get overwritten

- Should you wish to KEEP the video footage of an incident from not being overwritten, **stop the recording** soon after an incident has occurred. (Either press “OK” or disconnect the power or remove the Micro SD card).

- Alternately use a larger capacity SD card or lower the recording resolution (eg; a 32GB SD card at VGA resolution will offer you 640 minutes of record time) or otherwise use a second Micro SD card as a backup.

Video Mode Setting (on screen menu options)

Turn on the NAVCAM-HD and press the "OK" button to stop recording. Press the **MODE** button until the Orange Movie camera icon appears in the top left of the LCD display. Press the **MENU** button to enter the VIDEO MODE settings menu. Press the ▲/▼ buttons to select one of the setting options and press then OK to select that option.

Available Options:

Menu Option	Selection Options	Option Description
Image Size:	Select [HD 1280x720 VGA 640x480]	**HD** 1280x720 gives higher image quality, less record time **VGA** 640x480 gives longer record time, less image quality
Time stamp:	Select [On / Off]	Records the current date and time onto the video file (date/time is set in the setup options)
Motion detect:	Select [On / Off]	When set to "On", the Navcam-HD will begin recording when it senses movement. For example; if the Navcam-HD is left on, the camera will begin recording if the image is disrupted (like a person walking by)
Audio record:	Select [On / Off]	Turns the built in microphone on or off. For privacy this can be turned off so that no audio is recorded.
Record time:	Select [2 or 5 or 15 Minute]	Select the recording increment length to determine the size of each video file / time of each increment. For example, a 4GB Micro SD card recording at 720p resolution will fit 40 minutes of footage which equates to 20 x 2 minute files or 8 x 5 minute files or 2 x 15 minute files.
Night Mode:	Select [Cancel / Auto]	If set to "auto" the IR LED's around the camera lens will assist the lens in capturing video in low light.

Setup Mode Setting (on screen menu options)

Turn on the NAVCAM-HD and press the "OK" button to stop recording. Press the **MODE** button until the Orange Movie camera icon appears in the top left of the LCD display. Press the **MENU** button to enter the VIDEO MODE settings menu then press the **MODE** button to enter the SETUP menu. Press the ▲/▼ buttons to select one of the setup options and press then OK to select that option. (pressing the MODE button again takes you back to the Video mode setting)

Available Options:

Menu Option	Selection Options	Option Description
Format:	Select [OK / Cancel]	Select "OK" to format the Micro SD card. Warning, formatting the card will erase all content on the card.
Language:	Select [English/ Simplified Chinese/ Traditional Chinese/ Japanese /Russian /Korean/ Spanish/ German/ Portuguese/ Turkish]	Choose a language for the on screen menu display
Default Setting:	Select [OK / Cancel]	Select OK to return the device settings back to the original factory settings.
Frequency:	Select [50HZ /60HZ].	For older television sets or monitors which cannot auto select the refresh rate frequency, select 50Hz. (generally not applicable for newer TVs in Australia / New Zealand)
Date:	Select [Set Date/ Cancel]	Use this option to set the date and time on the device. Should the device not be used for a long period of time and should the battery run completely flat, then the date/time will need to be re-set.
TV Out:	Select [NTSC/ PAL]	For older television sets or monitors which cannot auto select the television display system/colour information, select "PAL". (generally not applicable for newer TV's in Australia / New Zealand)

Digital Still Camera (DSC) Mode Settings:

Turn on the NAVCAM-HD and press the "OK" button to stop recording. Press the **MODE** button until the Yellow camera icon appears in the top left of the LCD display. Next press **MENU** to enter into DSC mode settings. Press the ▲/▼ buttons to select one of the setup options and press OK to select that option. (pressing the MODE button again takes you back to the Setup mode setting)

Available Options:

Menu	Selection Options	Option Description

Option		
Image Size:	Select [**5M** 2560 x 1920/ **3M** 2048 x 1536/ **2M**1600 x 1200/ **1M** 1280 x 1024]	**5M** 2560x1920 has a higher image quality, but uses up more data/file space **1M** 1280x1024 has less image quality, but uses up less data/file space
Time stamp:	Select [**On** / **Off**]	Records the current date and time onto the still image picture file (time is set in the setup options)
Night Mode:	Select [**Cancel** / **Auto**]	If set to "auto" the IR LED's around the camera lens will improve image quality in low light.

Playback Mode Setting

Turn on the NAVCAM-HD and press the "OK" button to stop recording. Press the **MODE** button until the either the purple "play" triangle icon or the black/white film strip icon appears in the top left of the LCD display. Next press **MENU** to enter into Playback mode settings. Press the ▲/▼ buttons to select one of the setup options and press OK to select that option

Available Options:

Menu Option	Selection Options	Option Description
Delete:	**Select [This image/ All/ Cancel]**	Choose to delete the current image, all images or cancel and exit this option
Show thumbnails:	**Select [OK/ Cancel]**	Show the images/videos as small "thumbnail pictures" for easier reviewing
Volume adjust:	Select [**1/ 2/ 3/ 4/ 5/ 6**]	Adjust the playback volume for video playback (only available in video settings)

USB Connection

Connect the NAVCAM-HD to a Windows (XP or 7) PC with the USB cable (included). The LCD screen on the NAVCAM-HD will turn blue with the words “MSDC”.

Under “My computer” or “Windows Explorer” you should see a drive which will resemble a “Removable Disk (?:)” (like a USB Flash drive or Hard drive). Recorded files are stored in the DCIM\xxxDSCIM\ folder, and the files are named as [PICT****. AVI for video or PICT***.JPG for still images. These files can be played back using Windows Media player or a compatible .avi media player or an image viewer (for images)

Playback on TV

Connect the NAVCAM-HD to a TV or AV monitor with the supplied AV cable (3.5mm phono plug one end, RCA composite connectors on the other end).

Turn on the NAVCAM-HD and select **Playback** mode automatically (as described above in Playback mode setting).

Note:

1) A Micro SDHC card must be inserted into the device before recording.

2) The NAVCAM-HD supports cycle recording in increments of 2/5/15 minutes. It will overwrite the oldest video files with new ones. Depending on the size of the Micro SDHC card and the speed rating of the card, there may be as much as a 3 second pause time whilst old files are overwritten with the newer files. This pause time will not be recorded.

3) As the NAVCAM-HD has a DC5V input, please use the original car charger which will step down the car’s 12/24VDC to 5VDC and fuse the circuit in the event of an overload. The inline fuse is contained within the 12v DC plug and is replaceable.

Video/Photos Storage Capacity

	Resolution	2GB	4GB	8GB	16GB	32GB
Video	1280*720 (720P)	20min	40min	80min	160min	320min
	640*480 (VGA)	40min	80min	160min	320min	640min
Photo	1M (1280*1024)	11650 photos	23300 photos	46600 photos	93200 photos	186400 photos
	2M (1600*1200)	8400 photos	16800 photos	33600 photos	67200 photos	134400 photos

	3M (2048*1536)	6000 photos	12000 photos	24000 photos	48000 photos	96000 photos
	5M (2560*1920)	3500 photos	7000 photos	14000 photos	28000 photos	56000 photos

Connecting the NAVCAM-HD in the Car

- **The above wiring diagram shows a left hand drive vehicle. Wiring path is only a suggestion.**

1. Crashcam-HD device mounted behind the rear vision mirror.
2. 12v DC cable routed behind rear vision mirror
3. Cable hidden behind roof headlining
4. Cable hidden behind “A” pillar – beware of airbag equipped cars
5. Cable is routed beside the dashboard / near the door hinges
6. Cable is passed under the passenger carpet (or under the dashboard)
7. 12v DC plug is connected to the car’s 12v “cigarette socket”.

Once the wiring and installation of the Navcam-HD have been completed, please check the following:

- With the car’s ignition on (or engine started), the red LED indicator on the Navcam-HD will light up and the LCD screen should turn on. Recording should start automatically. This will indicate a successful installation –

- When the car’s ignition is turned off, the device should turn off within 20 seconds and a “Goodbye” message will appear on the LCD screen. If this doesn’t happen then power is still being supplied to the car’s 12v socket and the device will need to be switched off manually.

TROUBLE SHOOTING / Q & A

Fault	Suggestion
Device does not turn off	If in vehicle: check that the 12V socket is not still powered (on) when the key is removed (as with some European cars). Wait 20 seconds for file finalisation / closure. Disconnect power lead to device Press “ok” to stop recording, then press power to turn off.
Cant playback the .avi video files	Upgrade your windows media player version or use an alternate media player such as VLC media player
My video/pictures of an incident are NOT there	Check the capacity of your SD card, the files may have been overwritten in the record cycle process. Ensure STOP THE RECORDING if you want to keep a video/picture of an event otherwise it will be over written.
The device has frozen / stopped working.	Check the speed of your Micro SD card. We recommend class 4 for faster transfer rates, especially If the record file size is bigger (say 15 min recording increments at 720 HD). Press the “reset” button with a paper clip to reset the settings back to default
The date/time is incorrect	Reset the date / time in the settings menu. If the battery runs completely flat, then the date/time will need to be reset
The image is upside down on the display	Press the “flip button” to invert the image
The suction cup keeps coming off	Ensure the windscreen and surface area of the suction cup are clean. In wet or very hot weather, the suction cup mount may need to be reapplied.
Cant see the device in my computer	Check the USB cable connection to the device and USB port. Try another USB port, possibly directly to the PC/notebook (rather than through a USB hub)
No Video displayed on TV	- Check the cable connections on the Navcam-HD and that playback mode is selected - Check the AV input selection on the TV

PRODUCT SPECIFICATIONS

- True 720P HD video recording in AVI format, no special software needed for playback
- Video output: 1280 x 720 @ 30 fps, True 720P HD (not software interpolated)
- Standard .avi video formats and .jpg image formats for maximum playback compatibility.
- Photo output: Maximum resolution JPEG 2560 x 1920 (5 megapixels)
- Built-in Infra Red LEDs for improved image quality in low light.
- High density CMOS sensor for high quality image capture and processing
- High-speed dynamic video recording, instant response to light environment
- 2.5 inch colour TFT LCD display screen
- 270 degree rotatable lens for optimum positioning or record what’s behind you.
- On board rechargeable Lithium battery
- Motion detect recording for when you’re not there.
- 120 degree wide angle lens to capture more detail.

- Multi language menu.
- Loop cycle record in selectable 2 or 5 or 15 minute increments
- Time and date stamp on video or still image whilst recording
- USB direct connection to PC (no need for a card reader)
- When in used in a car, automatic on / off when car is on / off
- This device can be charged and record at the same time.
- Supports Micro SDHC up to 32GB. Class 4 cards are recommended
- Built-in microphone
- AV OUT function for playback on TV's / AV monitors.
- Portable – runs on batteries so take it with you!

For further product information on this and other products please visit our product web page at www.navig8r.com.au or email support@navig8r.com.au

Warranty Against Defects

Navig8r is a brand sold and marketed by *Laser Corporation Pty Ltd* ("Laser"). Laser hereby warrants your new product to be free from defects in materials and workmanship for 12 months, from the date of purchase, provided that the product is used in accordance with accompanying recommendations or instructions where provided. The benefit of this warranty is in addition to your rights under the Australian Consumer Law and to other rights and remedies of the consumer under a law in relation to the goods or services to which the warranty relates.

Through a network of retailers and resellers, Laser will provide you with your choice of a refund, repair or exchange (where possible) for this product if it becomes defective within the warranty period. This warranty will no longer apply where the defect is a result of alteration, accident, misuse, abuse, normal wear and tear, neglect or improper storage.

Please retain your receipt as proof of purchase

How to make a product warranty claim:

Step 1: Find your receipt which proves the date of purchase. Where the date of purchase cannot be verified, your place of purchase or Laser will make an assessment based on the date of manufacture, the condition of the Laser Product and the type of defect.

Step 2a): Contact your place of purchase. They will assess the nature of the fault and refund or replace the product as per their store refund or warranty policy.

Step 2b): If your place of purchase cannot be contacted, then you can contact Laser . Customer Service with details of your defective Laser Product: Phone: (02) 9870 3355; or Email: service@laserco.com.au or online www.laserco.net/support/warranty (click on "Consumers (End Users)"). Our business address is at 1/6-8 Byfield Street, North Ryde, NSW 2113

Step 3: Laser will issue you with a Return Authorisation (RA) number within 48 hours. When requested, send us the defective Product and a copy of your receipt. Laser will cover the cost of the return delivery.

Step 4: Wait for us to contact you. Once we have received your defective Laser Product for inspection, we will inform you of our assessment of your claim within 7 days. When we contact you, we will firstly let you know whether you have a valid claim under this Warranty, and if so, we will inform you whether your defective Laser Product will be replaced or repaired, together with the number of days you can expect to wait to receive your replaced or repaired Laser Product.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.